



Vicon Access Control Master Multi-Door Controllers



Overview

The Vicon Access Control (VAX) system consists of a dedicated Vicon Access Control Server and the edge Controller(s). The Server contains the operating system, database engine, web server, application software and configuration data. The Controller communicates back to the Server over the network and provides an interface to readers, relay outputs, door locks, etc.

Vicon offers a series of multi-door controllers, offered in two, four, six and eight-door versions. These controllers allow multiple doors to be controlled through a single IP address; they are ideal for legacy wired system retrofits, equipment room mounting or area where security, space, time and budget are important considerations. The controllers provide LED indicators for system status and an LCD display and tactile buttons for simple IP configuration and system diagnostics. Configurable dry contact inputs and relay outputs are supported.

Product at a Glance

- ▶ Two, four, six and eight-door models
- ▶ Used for centralized control of multiple door
- ▶ Ideal for legacy wired systems
- ▶ Multiple doors controlled through a single IP address
- ▶ Single-board design provides status LEDs, on-board communications, back-up battery and removable terminal blocks
- ▶ Unlimited number of door time zones
- ▶ Customizable holiday user groups and holiday setup
- ▶ Powered by 12 VDC

Specifications

Controller Hardware	
Processor:	32-bit microprocessor based
Power (VAX-MDK Master Control Panel):	Supply: 12 VDC input from external power supply; up to 6 A current, 5 A typical Power Output: 2X 12 VDC output for connection to one-four VAX-EXP-2D; up to 2.5 A per output, 5 A total Battery Backup: 1X connection to supplementary external battery backup (12-13.8 VDC in); primary backup power
Power (per VAX-EXP-2D two-door expander board):	Lock: 2X solid state 12 VDC, 500 mA/24 VDC, 250 mA (with optional converter) Auxiliary Output: 2X 12 VDC, 350 mA should be located in external power supply
Network:	Speed: 1X RJ-45 10/100 Mbps ethernet port Wire Spec: 328 ft (100 m) max distance, Cat5 or better Modes: Static or DHCP MAC: Unique Encryption (panel-server): 256 bit AES option
I/O:	Relay per door: 1X wet contact solid state relay, 12 VDC, 500 mA Relay per door: 2X dry contact solid state, 24 VDC, 1A limit Inputs per door: 3X supervisor or digital (REX, door contact, HDCP opener, auxiliary) Wire Spec: 500 ft (152 m) max distance; 2 conductors, stranded 22 AWG, shielded
Readers:	Reader Port: 2X Wiegand (D0, D1, BUZ, LED, 12 VDC, 350 mA, GND) Wire Spec: 500 ft (152 m) max distance; 6 conductors, stranded 24 AWG or thicker, shielded
User Interface:	LEDs: 3X power; 1X Ethernet Status; 2X reader data flow; 6X relay status; 4X RS-485 status indicators LCD Display: 2-line LCD with backlight Push Buttons: 4x tactile switch (keyboard for data entry) Sound: 1X 90 db Piezo
Communication:	2X RS-485 outputs for communication from VAX-MDK Master control panel to one-four VAX-EXP-2D two-door expander boards (use 2 interconnect strips, included) Wire Spec: 2000 ft (600 m) max distance; 2 conductors, stranded 22 AWG, shielded
Protection:	Over-Current: 12 VDC outputs Surge: 12-13.8 VDC input Tamper: Photo tamper sensor
Anti-Passback:	Requires that a VAX-MOD-MEM module to be installed onto the PCB. Refer to illustration provided.
Time Keeping:	Date/Time: 1X on-board real-time clock (no battery required, maintains up to 1 month without power)
Storage:	Stores up to 100,000 cardholders. Stores up to 50,000 event, first in first out queue.
Mechanical and Environmental	
Dimensions:	W: 11.625 in. (295 mm); H: 17.25 in. (438 mm); D: 3.625 in. (92 mm)
Construction:	Metal enclosure
Operating Temperature:	32 - 122° F (0 - 50° C)
Operating Humidity:	10% to 90% relative humidity, non-condensing
Country of Origin:	Canada
Approvals:	UL; ETL listed (conforms to UL 294); certified to CSA-22.2 no. 205; CE

Ordering Information

Model	Description
VAX-MDK-2	TWO DOOR MULTI-DOOR KIT; includes 1 master and 1 two-door board mounted in a steel vented and lockable enclosure
VAX-MDK-4	FOUR DOOR MULTI-DOOR KIT; includes 1 master and 2 two-door boards mounted in a steel vented and lockable enclosure
VAX-MDK-6	SIX DOOR MULTI-DOOR KIT; includes 1 master and 3 two-door boards mounted in a steel vented and lockable enclosure

Ordering Information (cont'd)

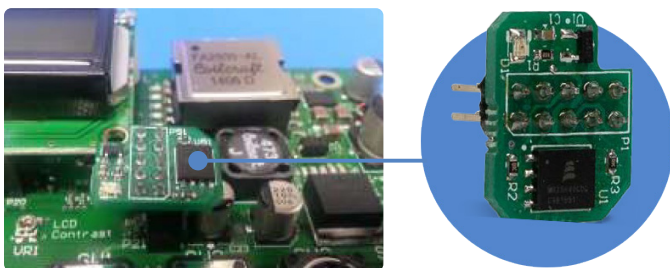
Model	Description
VAX-MDK-8	EIGHT DOOR MULTI-DOOR KIT; includes 1 master and 4 two-door boards mounted in a steel vented and lockable enclosure
VAX-EXP-2D	TWO DOOR EXPANDER; used to expand 2, 4 or 6 multi-door kits; no enclosure
Options	
VEVA-MC00N0-00	Vicon Access Control Server; for customized preinstallation of selected VAX software license; desktop model
VEAA-1U00N0-00	Vicon Access Control Server; for customized preinstallation of selected VAX software license; rack-mount model
VAX-MOD-MEM	Module to expand memory; required for anti-passback
VAX-PRS-STRIP	Interconnect strip; connects the Master Control Panel to door expansion board or I/O expansion board

VAX-MDK Power Consumption Chart

The VAX-MDK Multi-Door Kits requires an external 12 VDC power supply; if the optional battery backup is being used, a 13.5 VDC is recommended to fully charge the battery. Below are power consumptions when using the VAX-MDK kits with typical number of readers and door strikes. For details on specific power calculations, speak to your Vicon sales representative.

Model	12 VDC Power Supply	13.5 VDC Power Supply
VAX-MDK-2	1.5 A	1.4 A
VAX-MDK-4	3 A	2.75 A
VAX-MDK-6	4.25 A	4.1 A
VAX-MDK-8	5 A	5 A

VAX-MOD-MEM Installation



Data Sheet Number: V274-20-03
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Controller PCB Diagram

